

In view of the above, it will be seen that the objects of the invention are achieved. As various changes could be made in the above materials and methods without departing from the scope of the invention, it is intended that all matter contained in the above description shall be interpreted as illustrative and not limiting.

We claim:

1. An immunostimulating composition comprising encapsulating microspheres, which may contain a pharmaceutically-acceptable adjuvant, wherein said microspheres are comprised of (a) a biodegradable-biocompatible poly(DL-lactide-co glycolide) as the bulk matrix, wherein the molecular weight of the copolymer is between 50,000 to 100,000 daltons and the matrix is produced by a solvent evaporation process and (b) an immunogenic substance consisting of a native (oligomeric) HIV-1 envelope antigen that is conformationally stabilized by the polymer matrix and serves to elicit in animals the production of HIV-specific cytotoxic T lymphocytes and antibodies preferentially reactive against native HIV-1 envelope antigen.
2. The immunostimulating composition described in <sup>claim 1</sup> wherein the antigen is pre-encapsulated into a conformationally stabilizing hydrophilic matrix consisting of an appropriate mono-, di- or tri-saccharide or other carbohydrate substance by lyophilization prior to its final encapsulation into the PLG microsphere by a solvent extraction process employing acetonitrile

as the polymer solvent, mineral oil as the emulsion's external phase, and heptane as the extractant.

3. The immunostimulating compositions described in claims 1 and 2 wherein the immunogenic substance is a conformationally native subunit of any chronic intracellular pathogen which, in the course of natural infection with that pathogen, is exposed to the host immune system on the surfaces of free pathogen and/or pathogen-infected cells.

4. The immunostimulating compositions described in claim 3 wherein the amount of said immunogenic substance within the microcapsule comprises between 0.5% to 5.0 % of the weight of said composition.

5. The immunostimulating compositions described in claim 4 wherein the relative ratio between the <sup>amount</sup> of the lactide:glycolide components of said matrix is within the range of 52:48 to 0:100.

6. The immunostimulating compositions described in claim 5 wherein the molecular weight of said copolymer is between 4,000 to 50,000 daltons.

7. A vaccine consisting of a blend of the immunostimulating compositions described in claims 5 and 6.

8. The immunostimulating compositions described in claims 5, 6, and 7 employed as a parentally administered vaccine wherein the diameter size range of said vaccine microspheres lies between 1 nanometer and 20 microns.

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9. The immunostimulating compositions described in ~~claims 5, 6, and 7~~<sup>claim 5</sup> employed as a mucosal vaccine wherein the size of more ~~than~~ 50% (by volume) of said vaccine microspheres is between 5 to 10 microns in diameter.

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